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Constraints to Agricultural Marketing Information' Accessibility among Cassava and Maize Farmers in Oyo State, Nigeria

Adeniyi Rhoda Titilayo

Department of Agricultural Economics and Extension Ajayi Crowther University, Oyo, Oyo state

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ABSTRACT

The study examined the constraints to Agricultural Marketing Information (AMI) accessibility among cassava and maize farmers in Oyo State. A multi-stage sampling procedure was used to select 143 respondents. Data on respondents' access to AMI, purpose and constraint to access AMI, and selected personal characteristics were analysed with percentage, Weighted Mean Score (WMS), Chi-square, and Pearson Product Moment Correlation (PPMC) at 0.05. The result showed that the respondents were adults (65.2%), farming as primary occupation (82.5%), with other sources of income being trading (30.1%). The respondents' land ownership techniques were the family system (58.0%), with the use of hired labourers (72.0%). The most interpersonal access to AMI was friends and family (WMS=197.9); with the most accessible ICT-based AMI being Radio (WMS=172.0), which was high for 60.1% of the respondents. Pre-planting operation ranked first among the purposes of accessing AMI on farm input sources survey (WMS=181.1), followed by post-harvest AMI on transportation of produce (WMS=166.4) and production AMI on crop cultivation (WMS=158.0). However, the most constraining factor to AMI accessibility was inadequate finance (179.0) and insufficient incentives (160.8); which was low for 51.7% of the respondents. There was a significant relationship between respondents' secondary occupation (r=34.774), primary occupation (r=19.518), constraint to AMI (r=0.670), and access to AMI. The study concludes that inadequate availability of funds and incentives hinder the respondents' access to AMI Hence, respondents' resources should be pulled together for better access to AMI.

Introduction

Effective communication, hinges on the deployment of appropriate information conduits, facilities, and resources to support targeted developmental activities and aspirations. Among the critical resources necessary for agricultural advancement, information plays a foundational role across the value chain from production to marketing, irrespective of a country's development status (Adeniyi & Yekinni, 2018). Consequently, the value of information in enabling efficient market functioning has remained a core concern in economic theory and practice. In Nigeria, access to timely

Corresponding author; Adeniyi Rhoda Titilayo
Email: *rt.adeniyi@gmail.com*

and relevant agricultural market information (AMI) is pivotal to the successful cultivation and commercialisation of staple food crops such as cassava, maize, yam, cocoyam, plantain, pepper, tomatoes, and vegetables (Chiaka et al., 2022). Empirical studies underscore the significant contributions of cassava and maize to food security, livelihood enhancement, and GDP growth. These crops support the sustenance of over 800 million people across sub-Saharan Africa and serve as key sources of rural income in Nigeria. In 2022, Nigeria was ranked 61st globally in cassava exports and 214th among all exported crops, reflecting its strategic positioning in the global cassava value chain (Yekinni et al., 2020; Olajide et al., 2021; Taiwo et al., 2023; Nbamjo et al., 2021; Ikuemonisan et al., 2020; OEC, 2024). Agronomically, cassava and maize are often intercropped or grown as relay crops, a practice that enables efficient utilisation of land, labour, and other production resources, while also offering a sustainable climate adaptation strategy (Nwokoro, 2022). This dual cropping system maximises outputs from limited landholdings, a common characteristic among smallholder farmers. Despite operating at a small scale, many cassava and maize farmers are commercially oriented and thus require robust access to marketing information to navigate complex market dynamics (Adeniyi & Yekinni, 2018).

AMI is indispensable to actors in the cassava and maize value chains, as it supports informed decision-making that enhances sustainable production and marketing outcomes. It empowers farmers to collect, store, process, and disseminate critical market intelligence that improves productivity and profitability. Moreover, access to AMI equips farmers with essential knowledge for strategic production planning, such as optimal timing, location, scale, and mode of production, as well as marketing decisions involving price, distribution channels, and product form. Research also reveals a broad spectrum of AMI needs among cassava and maize farmers, ranging from input procurement and transportation logistics to the identification of viable market outlets and awareness of prevailing market prices (Olajide et al., 2022; Taiwo et al., 2023). These informational needs influence the channels through which farmers seek AMI. Notably, information is accessed through both interpersonal and technological means. Interpersonal sources include friends, family, extension agents, cooperatives, agro-input dealers, and fellow farmers, while ICT-based sources encompass radio, television, newspapers, internet platforms, mobile phones, digital marketing tools, and SMS services (Yekinni et al., 2019; Taiwo et al., 2023). Assessing the extent of farmers' access to AMI is crucial, as limited access exposes them to exploitative intermediaries who often manipulate prices to their disadvantage. Without reliable marketing information, farmers may sell their produce at sub-market prices, undermining their economic returns and discouraging future investments in production.

However, access to timely and relevant agricultural information has the potential to significantly improve farmers' bargaining power and enhance the prices they receive at the farm gate. The integration of information and communication technologies (ICTs) such as mobile phones, television, the internet, and radio has proven effective in this regard (Yekinni et al., 2019). These digital tools have been particularly instrumental in cassava production processes, including stem selection, land evaluation, preparation practices, optimal planting periods, and marketing of harvested produce (Taiwo et al., 2023). A notable example of ICT-enabled market information dissemination is the Kenya Agricultural Commodities Exchange (KACE), which operates a comprehensive agricultural marketing information system. This programme systematically collects, processes, updates, and disseminates market information daily to farmers and market intermediaries. It further provides a platform for farmers to post sales offers and input demands, including fertilizers and improved seeds. Feedback and system usage are monitored through localized outlets such as Rural-based Market Information Points (MIPs), Information Kiosks, Market Information Centres (MICs), SMS Sokoni (short messaging service), and the KACE website (http://www.kacekenya.com/). In the context of local broadcasting, Adams (2024) emphasized the role of frequency modulation (FM) radio, particularly community radio, in improving the efficiency and income levels of rural populations. Community radio stations, especially those broadcasting in indigenous languages, serve as critical tools for grassroots information dissemination. They deliver relevant and timely market updates that enable farmers to negotiate more favorable terms with traders (WCR, 2024).

In Nigeria, government-sponsored agricultural radio broadcasts serve as vital sources of market information for rural producers. These broadcasts are facilitated by agencies under the Federal Ministry of Agriculture and Water Resources, including the National Agricultural Extension and Research Liaison Services (NAERLS) of Ahmadu Bello University (ABU), Zaria, and the Federal Radio Corporation of Nigeria (FRCN) through its stations in Abuja, Enugu, Ibadan, and Kaduna. Complementing these efforts, state-owned stations such as Radio Borno (Maiduguri) and Radio Rivers (Port Harcourt) deliver localized agricultural content in native languages. Further contributions to grassroots communication are evident through community-driven initiatives such as the Ajayi Crowther University Radio Station (88.5 FM). Here, the Faculty of Agriculture hosts a weekly radio programme titled Latinuoko, which focuses on disseminating market and production-related information tailored to smallholder farmers (Faculty of Agriculture, 2024). Furthermore, mobile phones, in particular, have become indispensable tools in the agricultural information ecosystem due to their affordability, widespread availability,

and multifunctional capabilities. Their usage has enhanced the effectiveness of market information flow, expanded market reach, improved accessibility, and strengthened producer-consumer linkages. Current data indicates that mobile network coverage now extends to 80–90% of the population in many developing countries, with Nigeria's teledensity reaching 102.97% (Ugochukwu, 2024; Ojutkangas, 2020). One practical application of this mobile-enabled ecosystem is the Novus Agro Nigeria Commodity Index, which provides weekly updates on food crop prices through the Punch Newspaper's "AM Business" section (Novus Agro, 2024). Since its inception in 2012, this initiative has sought to bridge the information gap between rural producers and urban markets. Market data is collected weekly from key regional food hubs: Bodija Market (Ibadan, Mondays), Dawanau Market (Kano, Tuesdays), Igbudu Market (Delta, Wednesdays), Mile 12 Market (Lagos, Thursdays), and Relief Market (Anambra, Fridays). These updates are visually represented in Figures 1 and 2.

Monday **Novus Agro Nigeria Commodity Index** Prices from Jan 17 – Jan 23, 2014

MARKET	COMMODITY	WHOLESALE		RETAIL	LAST WEEK'S PRICE		VARIANCE		
	Bag (Kg)	Price (N)	LM	Price (N)	P/kg	(N) W(N)	R(N)	W (N)	R (N)
BODIJA MARKET OYO STATE	Drum Beans (Olotu)	100Kg	22,500	Congo	330	226 22,500	330	0	0
	Garri (White)	60Kg	10,000	Congo	110	92 10,000	110	0	0
	Groundnut (Edible)	100Kg	18,500	Congo	260	176 18,500	260	0	0
	Maize (White)	100Kg	9,000	Congo	130	108 9,000	130	0	0
	Onion (Violet)	100Kg	13,500		-	- 13,900	-	-400	-
	Palm oil (Red)	25Lt	6,000	Bottle	220	293 6,000	220	0	0
	Rice (Imported)	50Kg	10,500	Congo	350	292 10,500	350	0	0
	Sorghum (Red)	100Kg	10,000	Congo	150	95 10,000	150	0	0
	Soya Beans	100Kg	8,500	Congo	150	125 8,500	150	0	0

KEY: LM - Local Measure; W - Wholesale; R - Retail; N - Naira; P/kg - Price per kg; Kg - Kilograms
Source: Novus Agro Nigeria [Email: info@novusagro.com//Tel: +234-1-8501145]

Figure 1 The Punch, Monday, January 27, 2014

Tuesday **Novus Agro Nigeria Commodity Index** Prices from Jan 17 – Jan 23, 2014

MARKET	COMMODITY	WHOLESALE		RETAIL	LAST WEEK'S PRICE			VARIANCE		
		Bag (Kg)	Price (N)	LM	Price (N)	P/kg (N)	W(N)	R(N)	W (N)	R (N)
DAWANAU MARKET KANO STATE	Drum Beans (Olotu)	100kg	13,800	Tier	345	141 13,760		342	40	3
	Garri (White)	60Kg	5,933	Tier	267	143 5,960		268	-27	-1
	Groundnut (Edible)	100kg	14,600	Tier	365	177 14,800		370	-200	-5
	Maize (White)	100kg	6,200	Tier	155	62 5,840		146	360	9
	Rice (Imported)	50kg	8,933	Tier	573	191 8,780		550	153	43
	Sorghum (Red)	100kg	5,567	Tier	139	54 5,720		143	-153	-4
	Soya Beans	100kg	6,733	Tier	172	77 7,080		177	-347	-5

KEY: LM - Local Measure; W - Wholesale; R - Retail; N - Naira; P/kg - Price per kg; Kg - Kilograms
Source: Novus Agro Nigeria [Email: info@novusagro.com//Tel: +234-1-8501145]

Figure 2 The Punch, Tuesday 28, 2014

Despite the growing relevance of Agricultural Market Information (AMI) to production and marketing efficiency, farmers' access remains significantly hindered by a variety of systemic and socio-economic constraints. These include the unorganised structure of farming communities, inadequate post-harvest handling practices, exploitative behaviour of middlemen, delayed access to prevailing market price information, illiteracy, limited financial resources, poor marketing incentives, and insufficient awareness about available information sources (Syed & Badar, 2020; Abdullahi et al., 2021). Such barriers are particularly pronounced among cassava and maize farmers and pose critical challenges to equitable and timely access to AMI. Against this backdrop, this study investigated the constraints limiting access to AMI among cassava and maize farmers in Oyo State, Nigeria. Specifically, it examined the underlying purposes for which these farmers utilize AMI, explored their personal characteristics, and tested the significance of relationships between selected variables and access to agricultural market information

Methodology

The study was carried out in Oyo state, located between latitudes 708' and 9010' North of the Equator and longitudes 2010' and 4035' East of the Meridian. It is bounded by Ogun state in the south, Kwara state in the North, Osun state in the East, and the west, partly by Ogun state and partly by the Republic of Benin. The wet season is from April to October, with annual rainfall of 1220mm, while the dry season lasts from November to March. The Gross Domestic Product (GDP) of the states as estimated in the year 2007 was $16.12 billion, while the estimated per capital income was $2.666. The climate of the state favours the cultivation of crops like Maize, Millet, Rice, Yam, Cassava, Cashew, Cacao tree, Palm tree, and Plantain, among others (Wikipedia, 2024).

A multistage sampling procedure was used to select 143 cassava and maize farmers in Oyo State. Firstly, the simple random selection of 50% (two) of the four ADP zones in the state (Ibadan/Ibarapa zone and Saki zone). Secondly, the simple random selection of one block from each of the selected zones was carried out (Ona-Ara block was selected in Ibarapa/Ibadan zone and Igbeti block in the Saki zone). The third stage involved simple random sampling of 50% of the extension cells in each of the selected blocks, giving a total number of eight cells in all i.e. four cells per block. The fourth stage involves the random selection of 20% of farmers from the list of cassava and maize farmers in the selected cells, giving a total of 143 respondents for the study.

Table 1: Summary of sampling procedure and sample size

Selected ADP zones	Selected blocks	50% of total no of cells	Selected cells	No of the farmers selected
Ibadan/ Ibarapa	Ona Ara	4	Adigun	20
			Olounda	16
			Badeku jago	22
			Araromi Aperin	17
Saki	Igbeti	4	Tesi Apata	16
			Okun Kisi	20
			Afuse	18
			Bialaso	14
Total				**143**

The respondents' access to the available four interpersonal AMIs and 12 ICT-based AMIs was captured with the response option of 'To a large extent' (2), 'To a lesser extent' (1); and 'Not at all' (0). An index of access to the available ICT components was generated, and the level of ICT access was categorised using the mean score as the benchmark. The respondents' 8 purposes of use of AMI were measured with the response option of 'To a large extent' (2), 'To a lesser extent' (1), and 'Not at all' (0). The respondents' constraints to the use of AMI were captured with the response options of 'Serious constraint' (2), 'Mild constraint' (1), and 'Not a constraint' (0). An index of constraint to the available AMI was generated, and the level of ICT constraint was categorised using the mean score as the criterion. Personal characteristics like age, years of formal education, primary occupation, sources of labour, and land tenure were captured accordingly. Percentage, Weighted Mean Score (WMS), Chi-square, and Pearson Product-Moment Correlation (PPMC) at 0.05 were used to analyse the data.

Result and Discussion

Respondent's Personal Characteristics

The results in Table 2 show that 68.4% of the respondents were adults, indicating their ability to make decisions regarding their enterprise, particularly the type of AMI to pursue as cassava and maize farmers (FMYSD, 2019). However, the mean age of 45.7 years suggests that most of the respondents were farmers in their active years. This corroborates the findings of Taiwo et al. (2023), who reported that most cassava farmers were in middle age. The results on literacy level, as revealed by Table 2, indicate that 79% of the respondents were literate, with 31.5% having between 7 and 12 years of formal education, and the mean years of education being 9.6 years. This result demonstrates an appreciable level of literacy among the farmers, which aligns with the study findings of Ayegboyin et al. (2020) and Olajide et al. (2021), who documented that a substantial proportion of cassava farmers in the Southwest zone are literate. Literacy will encourage farmers to seek information and apply it.

The results further show that most (82.5%) of the respondents were primarily farmers, with 2.15% identifying as artisans. This implies that most respondents in the study area's income-generating activities stem from farming, while 33.6% do not have a secondary income-generating activity. This aligns with the study outcome of Adebayo, Adeniyi, and Emanuel (2022), where farming dominated the livelihood activities of rural dwellers. The findings of this study are similar to the assertion by Adeniyi and Yekinni that rural dwellers diversify into other livelihood activities to augment their income during off-seasons. Diversification helps provide insulation against environmental and economic shocks, trends, and seasons. The study's findings in Table 2 further reveal that more than half (58.0%) of the respondents cultivated family land, utilising hired labour (72.0%) for their cassava and maize production. This confirms the farmers' consistent practice of operating enterprises on a medium to large scale. It can be inferred that most respondents were indigenes based on their mode of land acquisition. The results indicating the use of paid labour align with the study reports of Yekinni et al. (2020) and Adeniyi and Adebayo (2021), where most agricultural field activities were carried out by hired labour.

Table 2: Distribution of respondents according to personal characteristics (n=143)

Variable	Frequency	Percentage
Age		
Adult (>35 years)	98	68.4
Youth (15-35)	45	31.6
Years of formal education		
None	30	21.0
1-6	25	17.5
7-12	45	31.5
>12	43	30.1
Main source of income		
	118	82.5
Traditional	6	4.2
Artisan	3	2.1
Civil servant	16	11.2
Other sources of income		
None	48	33.6
Farming	28	19.6
Trading	43	30.1
Artisan	19	13.3
Politics	5	3.5
Land tenure		
Purchase	14	9.8
Rented /Least	28	19.6
Family land	83	58.0
Communal ownership	17	11.9
Government land	1	0.7
Sources of labour		
Self	23	16.1
Family	17	11.9
Hired labour	103	72.0

Access to AMI sources

Analysis of data in Table 3 reveals that among interpersonal sources, friends and family were the most accessed channel of Agricultural Market Information (AMI), with the highest weighted mean score (WMS = 197.9), followed closely by extension agents and fellow farmers, both sharing equal accessibility scores (WMS = 195.1). Among ICT-based sources, radio emerged as the most accessible medium (WMS = 172.0), as further illustrated in Figure 4.4, followed by mobile phones (WMS = 143.3) and television (WMS = 95.9). In contrast, cinema (WMS = 5.6) and fax (WMS = 3.5) were the least accessed ICT tools among the respondents. These findings underscore the primacy of interpersonal communication in the dissemination of market information for cassava and maize in the study area. This is consistent with the assertion of Adebayo et al. (2022), who emphasised that interpersonal communication remains the most widely utilised communication method in rural communities. Similarly, the findings align with those of Taiwo et al. (2022), who observed that the main sources of agricultural information among rural farmers were extension agents and fellow farmers. In addition, the results corroborate the conclusions of Yekinni et al. (2019; 2020), which identified radio and mobile phone voice calls as the most frequently employed ICT tools in rural areas.

This trend is further exemplified by a field observation (Figure 3), where a farmer is seen listening to a radio while working, highlighting the critical role of radio in keeping farmers informed about market-related developments relevant to their cassava and maize farming activities. Furthermore, Table 3 indicates that 60.1% of the respondents fall within the low-access category, suggesting that a majority of farmers are unable to effectively access AMI through either interpersonal or ICT-based channels. This aligns with findings by Adeniyi and Yekinni (2018), which reported a generally low level of access and utilisation of ICT facilities among farmers in rural areas. Nevertheless, it is important to recognise that the increasing integration of ICTs into rural agricultural marketing holds promise for enhancing the inclusivity, efficiency, and responsiveness of agricultural systems. Strategic leveraging of these technologies could position rural farmers for greater resilience and competitiveness in an increasingly dynamic market environment.

Purpose of using ICT-based Agricultural Market Information

The result in Table 4 indicates that the most sought AMI was **for farm input surveys (WMS=88.8%). This underscores the central role AMI on the availability and quality of inputs such as seeds, fertilizers, and agrochemicals. This implies that the usage of AMI facilitates better farm planning and reduces the risk of purchasing substandard inputs. This finding aligns with Adebayo et al. (2021), who reported that digital tools significantly enhance farmers' access to timely input AMI in rural Nigeria.** The second purpose for seeking AMI was the search for farm input (WMS=184.6), with marketing research strategies information (WMS=139.2) being the least sought. **This implies that access to real-time price AMI through interpersonal and ICTs enables the respondents to make informed purchasing decisions, improving input affordability and planning efficiency. This was in tandem with the assertion of Umar et al. (2022), that AMI plays a vital role in minimizing exploitation by middlemen and promoting competitive market behavior in rural areas.** Also was in agreement with the findings of Syed and Badar, (2020) and Khan et al., (2020) in which marketing information is one of the most relevant ICT services that could be offered to farmers in Nigeria.

The result in Table 4 further reveals that AMI are also being employed in produce transportation facilitation (WMS=66.4%) and credit facility surveys (WMS=67.1%). This suggests a growing trend of using interpersonal and digital so**lution**s to overcome logistical challenges and access

Fig. 3: Radio as an ICT tool used in Gaa-Gisi-diin, Igbeti, Oyo state for Agricultural Marketing Information

Table 3: Distribution of respondents' access to AMI, n = 143

Information sources	To a large extent (%)	To a lesser extent (%)	Not at all (%)	Weighted score	Rank
Interpersonal sources					
Friends/Family	98.6	0.7	0.7	197.9	1st
Other farmers	95.1	4.9	0.0	195.1	2nd
Extension agent	96.5	2.1	1.4	195.1	3rd
Cooperative society	39.9	46.2	14.0	126.0	4th
ICT-based sources					
Radio	72.7	26.6	0.7	172.0	1st
Mobile Phone	65.0	13.3	21.7	143.3	2nd
Television	31.5	32.9	35.7	95.5	3rd
Poster	22.4	39.1	37.8	84.7	4th
Handbill	24.5	31.5	44.1	80.5	5th
Newspaper	21.7	20.3	58.0	63.7	6th
Notice board	18.2	27.3	54.5	63.7	7th
Internet	18.2	13.3	68.5	49.7	8th
Magazine	13.5	11.2	75.5	37.8	9th
Media van	3.5	20.3	76.2	24.9	10th
Cinema	5.6	94.4	0.0	5.6	11th
Fax	3.5	96.5	0.0	3.5	12th
Level of Access	**%**				
High	60.10				
Low	39.90				

financial service that are marketing of cassava and maize oriented Eze et al. (2023) noted that ICTs, including mobile-based logistics apps and fintech services, are bridging the infrastructure and finance gaps in Nigerian agriculture. These tools help the respondents reduce post-harvest losses and gain visibility into credit options, terms, and availability.

However, the result in Table 4 indicates a lower proportion of farmers (52.4%) reported sought AMI for marketing strategy research, with a relatively low weighted score of 139.2. This suggests that while farmers access AMI for operational purposes, strategic applications such as branding, product differentiation, and demand forecasting are still underutilised. This may stem from limited digital marketing skills, lack of tailored tools, or low awareness of the strategic importance of market intelligence. Ayanwale and Saka (2024) highlighted the need for targeted training and digital literacy initiatives to empower rural farmers especially youth with skills for value addition and competitive positioning in agricultural markets.

Table 4: Distribution of respondents by purpose use of AMI n = 143

Purposes of use	To a large extent (%)	To a lesser extent (%)	Not at all (%)	Weighted score
Farm input survey	88.8	10.5	0.7	188.1
Search for farm input prices	84.6	15.4	0.0	184.6
Produce transportation facilitation	66.4	33.6	0.0	166.4
Credit facilities survey	67.1	25.9	7.0	160.0
Market outlet survey	66.4	26.6	7.0	159.4
Information search on crop cultivation	62.9	32.1	4.9	158.0
Marketing strategies research	52.4	36.4	11.2	139.2

Farmer's Constraint to Use of AMI.

The result in Table 5 indicates that inadequate finance emerged as the most significant constraint (WMS=179.0) hindering the effective utilisation of Agricultural Marketing Information (AMI) among respondents. This aligns with earlier assertions that financial limitations are a persistent barrier in the adoption of ICT-based agricultural innovations in developing regions (Adeleke et al., 2021). Farmers, particularly smallholder arable crop producers, often operate under tight financial constraints, making it difficult for them to invest in the necessary tools, internet access, or training required to fully leverage ICT platforms for marketing purposes. Closely following financial inadequacy is the constraint of insufficient incentives (WMS=160.8). This may reflect the perception that the benefits of using ICTs for accessing AMI are not immediate or substantial enough to justify their cost or effort. This finding corroborates observations by Obayelu and Ogunlade (2022), who noted that without targeted support such as government subsidies, training programs, or cooperative-led initiatives, farmers may be reluctant to consistently engage with digital tools for market-related decisions.

The third most pressing constraint was the high cost of transportation (WMS=158.0), which has indirect implications on AMI accessibility. It should be noted that transportation challenges can affect the value chain efficiency and reduce the perceived utility of real-time market information. If farmers are unable to transport their produce to the identified markets due to high costs or poor infrastructure, the motivation to seek out or rely on marketing information diminishes significantly (Adegbite & Ayinde, 2023). Conversely, the constraint "ICT is not safe" (WMS=33.6) was the least ranked, suggesting that digital safety concerns are not a predominant barrier among the respondents. This indicates a level of trust in the digital systems and tools available for AMI, or possibly a limited awareness of cyber risks among rural users, which might require further investigation. However, it does reflect a positive outlook toward ICT adoption compared to earlier periods when digital scepticism was more pronounced (Olayemi & Kolawole, 2020). It is worth noting that the constraints faced by the farmers are issues that obstruct the judicious use of AMI in the study area for its full benefits, which can in turn affect the area of farmland cultivated and their standard of living (Yekinni et al, 2020). However, the result is in contrast with the result of Abdullahi et al., (2021) in which the most militating factor against the use of the most accessible AMI sources was poor network connectivity. The result in Table 5 shows that 51.7% of the respondents had a low constraint level to access the AMI available to them. The implication is that over 51% of the respondents reported a low level of constraints, this might be because most of the respondents were familiar with the most accessible ICT tool in the study area; such as radio (172.0), followed by mobile phone (143.3) and television (95.9) thereby giving them a low level of constraint to the use of the most accessible ICT-based AMI in the study area.

Table 5: Distribution of respondents by the constraints to the use of AMI, n=143

Constraints	Serious constraint (%)	Mild constraint (%)	Not a constraint (%)	Weighted score
Illiteracy	58.0	10.5	31.5	126.5
Poor rural infrastructure, such as electricity, GSM network	60.1	10.5	29.4	130.7
Inadequate technical knowledge	55.2	13.5	31.5	123.7
Network problems	59.4	16.1	24.5	134.9
Inadequate finance	79.7	19.6	0.7	179.0
Inadequate incentives	60.8	32.2	7.0	160.8
High transportation cost	60.8	36.4	2.8	158.0
Inadequate exposure to the use of ICT-based AMI	40.6	30.8	28.7	112.0
Language problem	14.7	44.1	41.3	73.5
ICT is not user-friendly	8.4	21.7	69.9	38.5
Household commitment and hindrances	14.7	40.6	44.8	70.0
Lack of an ICT policy to enhance ICT development in rural areas	46.2	26.6	27.3	119.0
Ignorance of information sources	15.4	35.7	49.0	66.5
Believe that ICT is not safe	11.2	11.2	77.6	33.6
Level of constraint	**%**	**%**		
High	41.			
Low	57.			

Relationship between selected Variables and access to AMI

The result in Table 6 shows that there is a significant relationship between the respondents' years of formal education (2=45.830), main source of income (2=28.6), other sources of income (2=22.07), land tenure (2=13.43), purpose of use index (r=0.225), constraint index (r=45.830) and access to AMI. The significance of years of formal education indicates that the higher the respondent's education, the higher their access to AMI. Education has been associated with access and utilisation of AMI as established by Ayegboyin et al., (2020) and Olajide et al., (2021). However, the significance of income and other sources of income implies that the respondents with higher income access the AMI more than the respondents with lower income. This aligns with the study report of Adeniyi and Adebayo (2023) that income is needed for wellbeing, including the maintenance of the ICT tools for accessing the current information. The significance of land tenure shows that the type of respondents' land ownership will inform their access to AMI, however, respondents who own land used for agricultural activities personally might have access to AMI than their counterparts. The type of AMI information sought will affect how often the AMI is accessed. However, the age status and sources of labour do not have a significant relationship with access to AMI

Table 6: Test of the relationship between selected Variables and access to AMI (n=143)

Variables	/χ2	Df	P-value
Years of formal Education	χ2=45.830	16	0.000
Main sources of income	χ2=29.6	3	0.000
Age status	39.139	38	0.419
Other sources of income	χ2=22.07	4	0.000
Sources of labour	χ2=3.346	2	0.118
Land tenure	χ2=13.43	4	0.000
Variables	**R-values**		**Value**
Purpose index	0.225		0.007
Constraint index	-0.564		0.000

Conclusion and Recommendations

Respondents are young adults who used inherited land to cultivate the arable crops grown using hired labour and diversify their livelihoods into trading. The study concludes that ICTs are increasingly embedded in rural agricultural marketing, with particular strength in operational functions like input sourcing and price searches. However, strategic applications like marketing research and brand positioning remain underutilised, which might be responsible to the low access to AMI via interpersonal (Family and friends) and ICT (Radio) sources. Hence, structural and economic constraints remain a critical hindrance, and these were the reasons for the low AMI accessibility; while literacy rate, livelihoods engagement, land tenure system adopted, the purpose of accessing AMI, and constraints encountered by the respondents informed their access to AMI. The study recommends that Cassava and Maize developmental information could be disseminated using Radio, and that the respondents should pull their resources together for better accessibility of funds, and also form a formidable team to enjoy incentives from the government, with the provision of land and low-interest loans. Furthermore, respondents' drivers of access to AMI should be enhanced by the developmental agencies for better access to AMI on Cassava and Maize capacity-building programs, and digital marketing training should be introduced for cassava and Maize farmers, especially youths.

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